FIG. 1

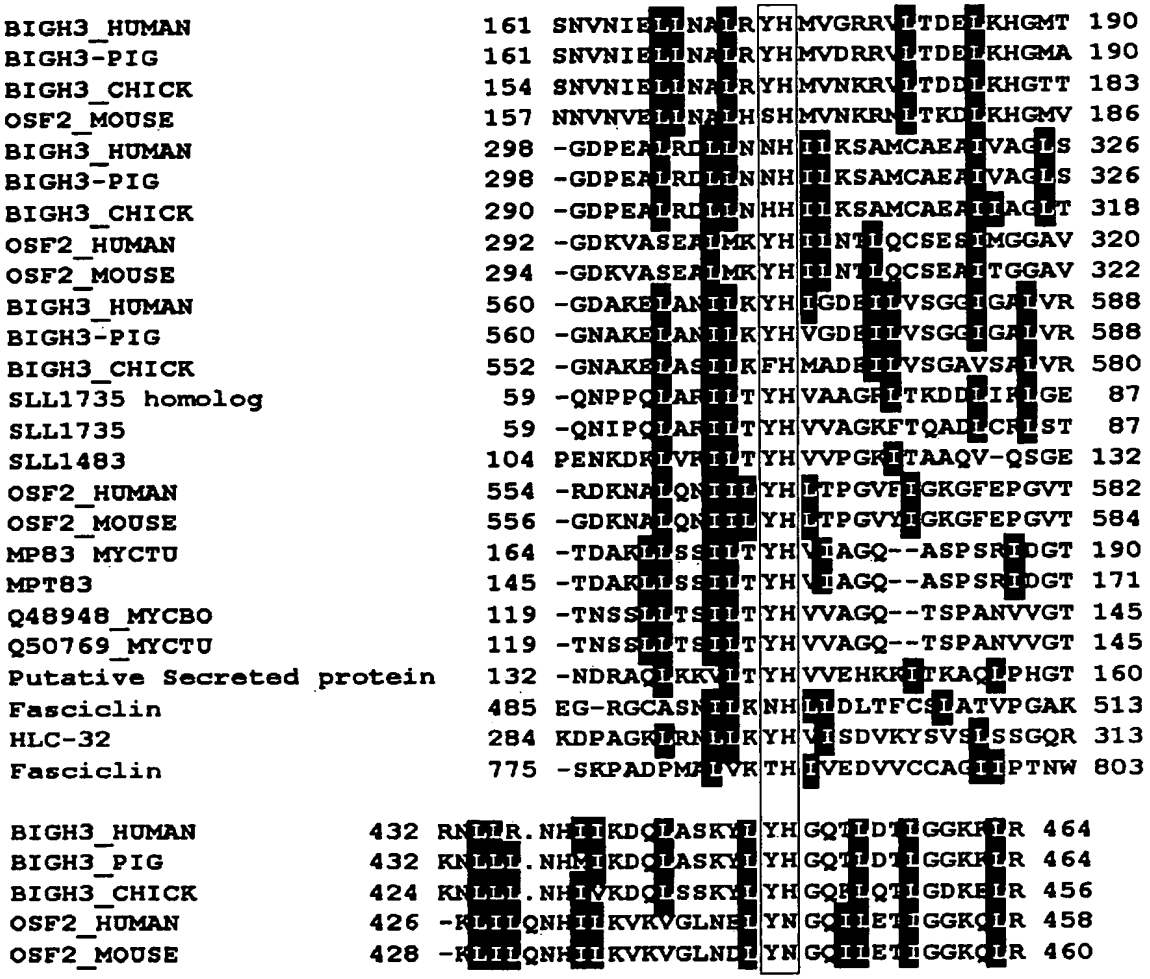

BIGH3_HUMAN 161 SNVNIELLNALRYHMVGRRVLTDELKHGMT 190
BIGH3-PIG 161 SNVNIELLNALRYHMVDRRVLTDELKHGMA 190
BIGH3_CHICK 154 SNVNIELLNALRYHMVNKRVLTDDLKHGTT 183
OSF2_MOUSE 157 NNVNVELLNALHSHMVNKRMLTKDLKHGMV 186
BIGH3_HUMAN 298 -GDPEALRDLLNNHILKSAMCAEAIVAGLS 326
BIGH3-PIG 298 -GDPEALRDLLNNHILKSAMCAEAIVAGLS 326
BIGH3_CHICK 290 -GDPEALRDLLNHHILKSAMCAEAIIAGLT 318
OSF2_HUMAN 292 -GDKVASEALMKYHILNTLQCSESIMGGAV 320
OSF2_MOUSE 294 -GDKVASEALMKYHILNTLQCSEAITGGAV 322
BIGH3_HUMAN 560 -GDAKELANILKYHIGDEILVSGGIGALVR 588
BIGH3-PIG 560 -GNAKELANILKYHVGDEILVSGGIGALVR 588
BIGH3_CHICK 552 -GNAKELASILKFHMADEILVSGAVSALVR 580
SLL1735 homolog 59 -QNPPQLARILTYHVAAGRLTKDDLIRLGE 87
SLL1735 59 -QNIPQLARILTYHVVAGKFTQADLCRLST 87
SLL1483 104 PENKDKLVRILTYHVVPGKITAAQV-QSGE 132
OSF2_HUMAN 554 -RDKNALQNIILYHLTPGVFIGKGFEPGVT 582
OSF2_MOUSE 556 -GDKNALQNIILYHLTPGVYIGKGFEPGVT 584
MP83_MYCTU 164 -TDAKLLSSILTYHVIAGQ--ASPSRIDGT 190
MPT83 145 -TDAKLLSSILTYHVIAGQ--ASPSRIDGT 171
Q48948_MYCBO 119 -TNSSLLTSILTYHVVAGQ--TSPANVVGT 145
Q50769_MYCTU 119 -TNSSLLTSILTYHVVAGQ--TSPANVVGT 145
Putative Secreted protein 132 -NDRAQLKKVLTYHVVEHKRITKAQLPHGT 160
Fasciclin 485 EG-RGCASNILKNHLLDLTFCSLATVPGAK 513
HLC-32 284 KDPAGKLRNLIKYHVISDVKYSVSLSSGQR 313
Fasciclin 775 -SKPADPMALVKTHIVEDVVCCAGIIPTNW 803
BIGH3_HUMAN 432 RNLLR.NHIIKDQLASKYLYHGQTLDTLGGKKLR 464
BIGH3_PIG 432 KNLLL.NHMIKDQLASKYLYHGQTLDTLGGKKLR 464
BIGH3_CHICK 424 KNLLL.NHIVKDQLSSKYLYHGQSLQTLGDKELR 456
OSF2_HUMAN 426 -KLILQNHIIKVKVGLNELYNGQILETIGGKQLR 458
OSF2_MOUSE 428 -KLILQNHIIKVKVGLNDLYNGQILETIGGKQLR 460

FIG. 2

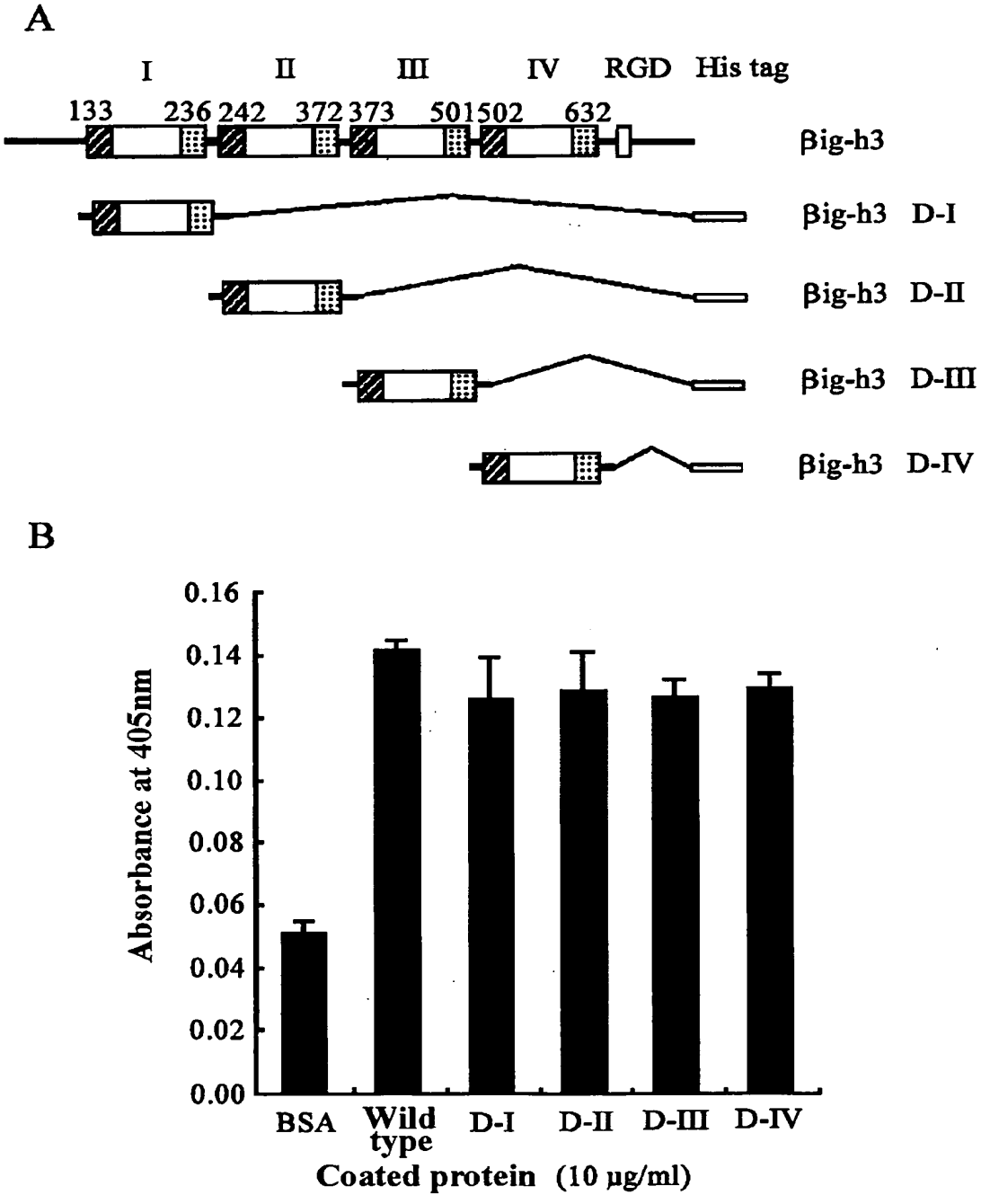

A
I
II
III
IV
RGD
His tag
133
236
242
372
373
501
502
632
βig-h3
βig-h3 D-I
βig-h3 D-II
βig-h3 D-III
βig-h3 D-IV
B
Absorbance at 405nm
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
BSA
Wild type
D-I
D-II
D-III
D-IV
Coated protein (10 μg/ml)

FIG. 3a

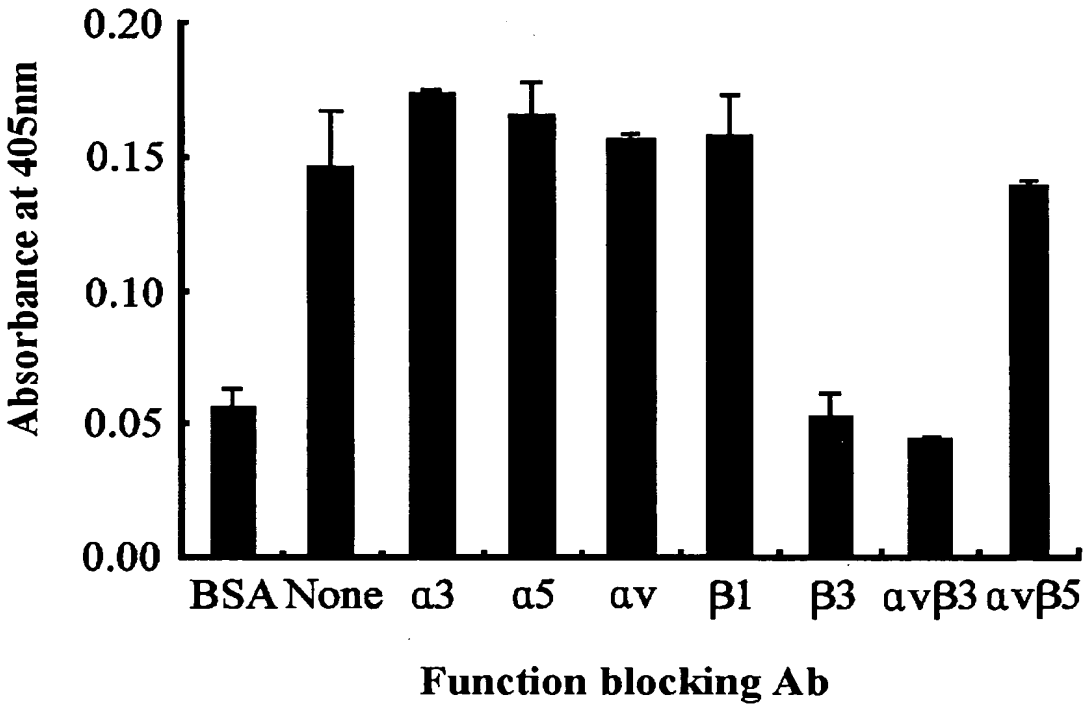

0.20
0.15
0.10
0.05
0.00
Absorbance at 405nm
BSA
None
α3
α5
αv
β1
β3
αvβ3
αvβ5
Function blocking Ab

FIG. 3b

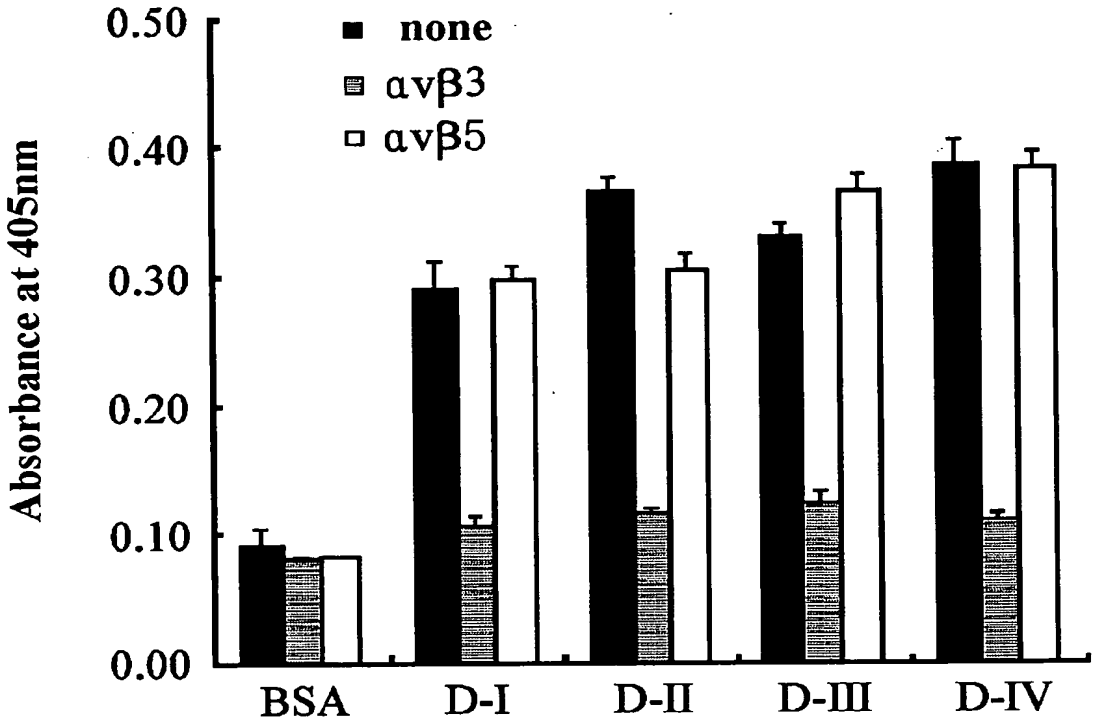

Absorbance at 405nm
0.50
0.40
0.30
0.20
0.10
0.00
none
αvβ3
αvβ5
BSA
D-I
D-II
D-III
D-IV

FIG. 3c

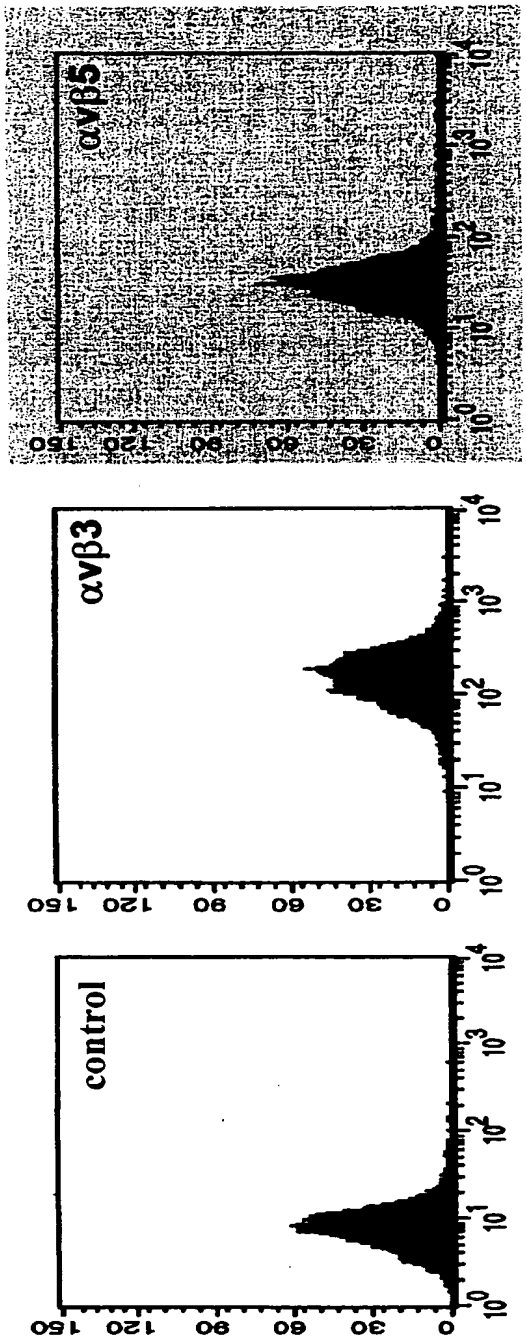


FIG. 3d

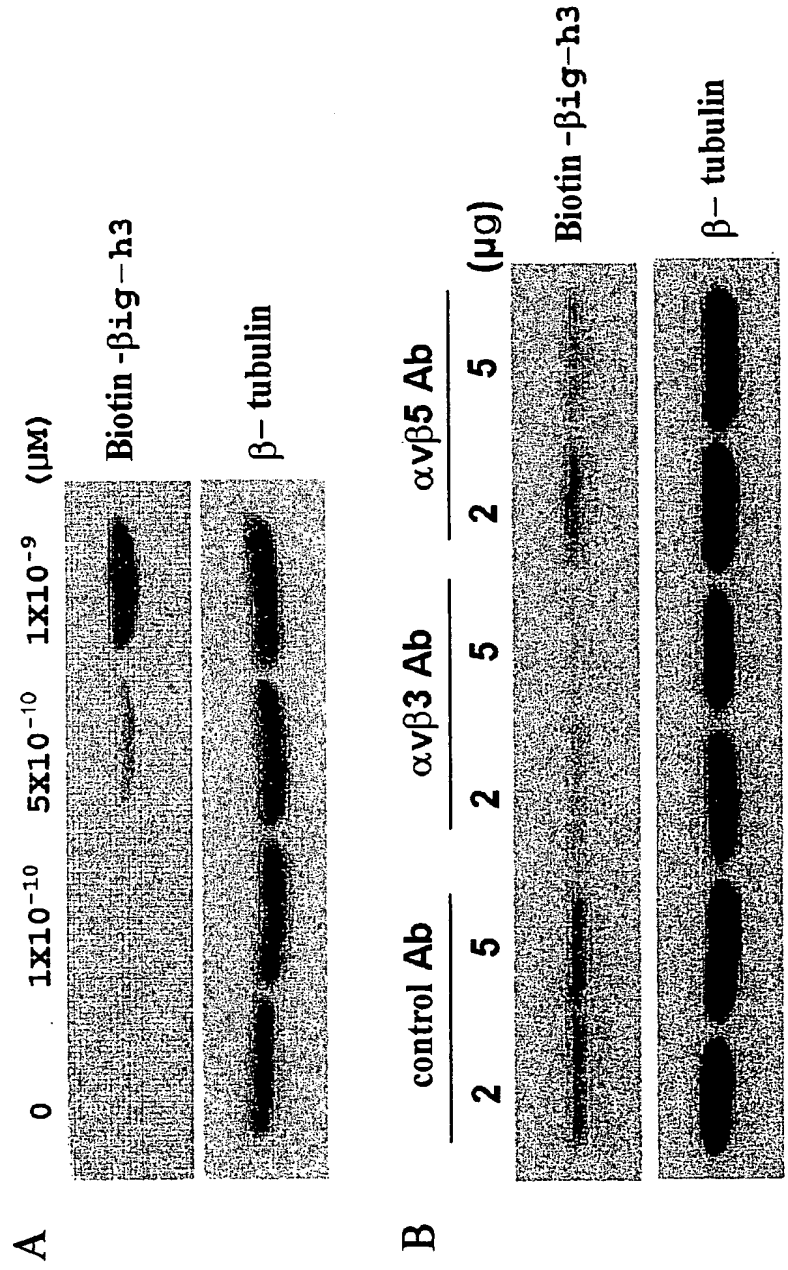

A
0
1X10-10
5X10-10
1X10-9
(μM)
Biotin -βig-h3
β- tubulin
B
control Ab
αvβ3 Ab
αvβ5 Ab
2
5
2
5
2
5
(μg)
Biotin -βig-h3
β- tubulin

FIG. 4a

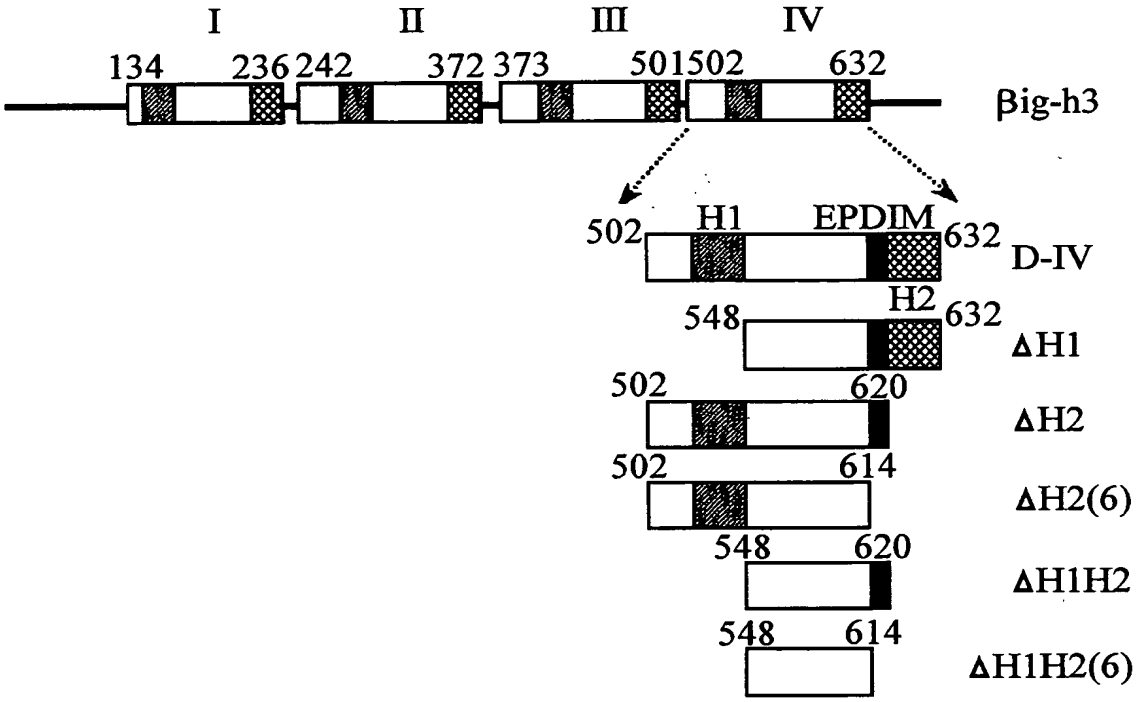

I
II
III
IV
134
236
242
372
373
501
502
632
βig-h3
H1
EPDIM
D-IV
H2
548
ΔH1
620
ΔH2
614
ΔH2(6)
ΔH1H2
ΔH1H2(6)

FIG. 4b

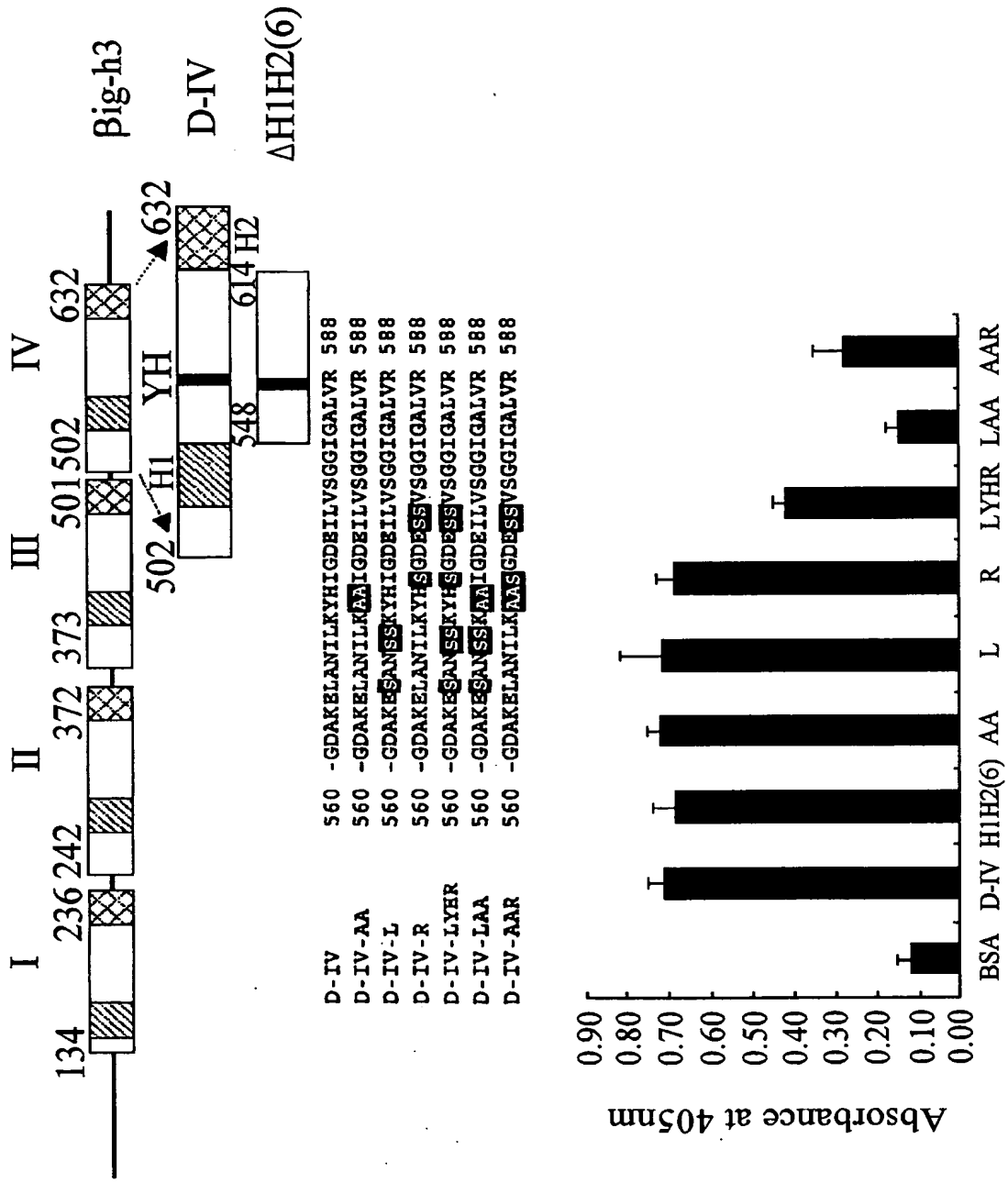

Big-h3
D-IV
ΔH1H2(6)
I
II
III
IV
134
236
242
372
373
501
502
632
H1
YH
H2
614
548
632
502
D-IV 560 -GDAKELANTILKYHIGDEILVSGGIGALVR 588
D-IV-AA 560 -GDAKELANTILKAAIGDEILVSGGIGALVR 588
D-IV-L 560 -GDAKESANSSKYHIGDEILVSGGIGALVR 588
D-IV-R 560 -GDAKELANTILKYHSGDESSVSGGIGALVR 588
D-IV-LYHR 560 -GDAKESANSSKYHSGDESSVSGGIGALVR 588
D-IV-LAA 560 -GDAKESANSSKAAIGDEILVSGGIGALVR 588
D-IV-AAR 560 -GDAKELANTILKAASGDESSVSGGIGALVR 588
Absorbance at 405nm
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
BSA
D-IV
H1H2(6)
AA
L
R
LYHR
LAA
AAR

FIG. 5

D-I	YH18	165	IELLNALRYHMVGRRVLT	182
D-II	YH18	301	EALRDLLNNHILKSAMCA	318
D-III	YH18	442	DQLASKYLYHGQTLETLG	459
D-IV	YH18	563	KELANILKYHIGDEILVS	580
YH18-con			KELANIHGIKLYDEILVS	

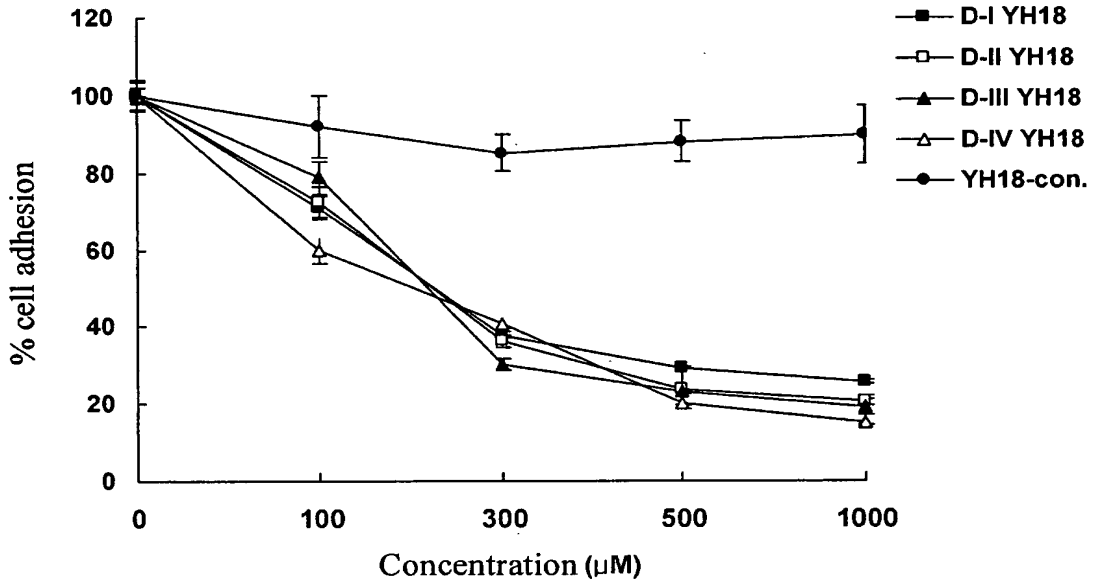


FIG. 6a

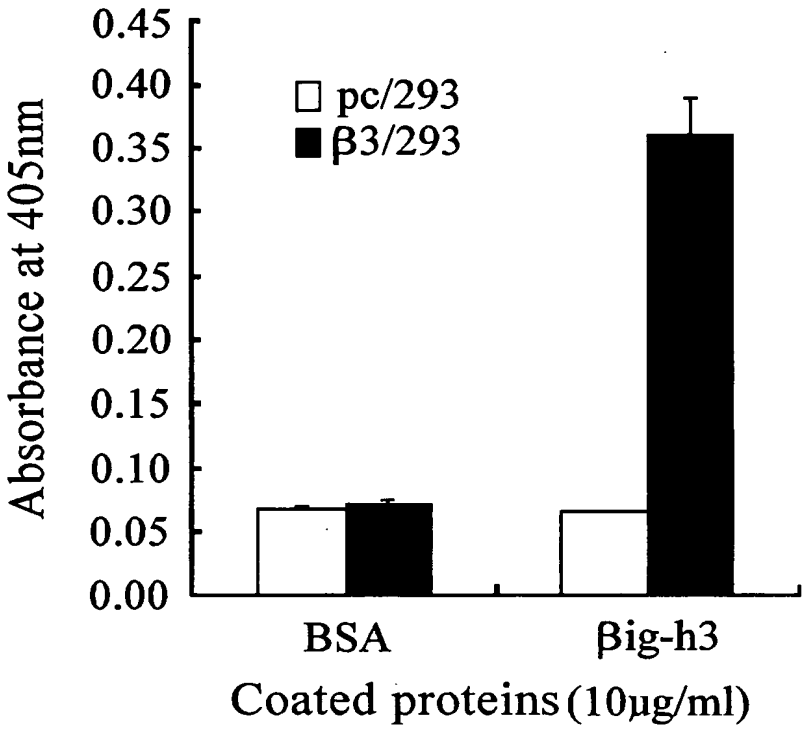

0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Absorbance at 405nm
pc/293
β3/293
BSA
βig-h3
Coated proteins (10μg/ml)

FIG. 6b

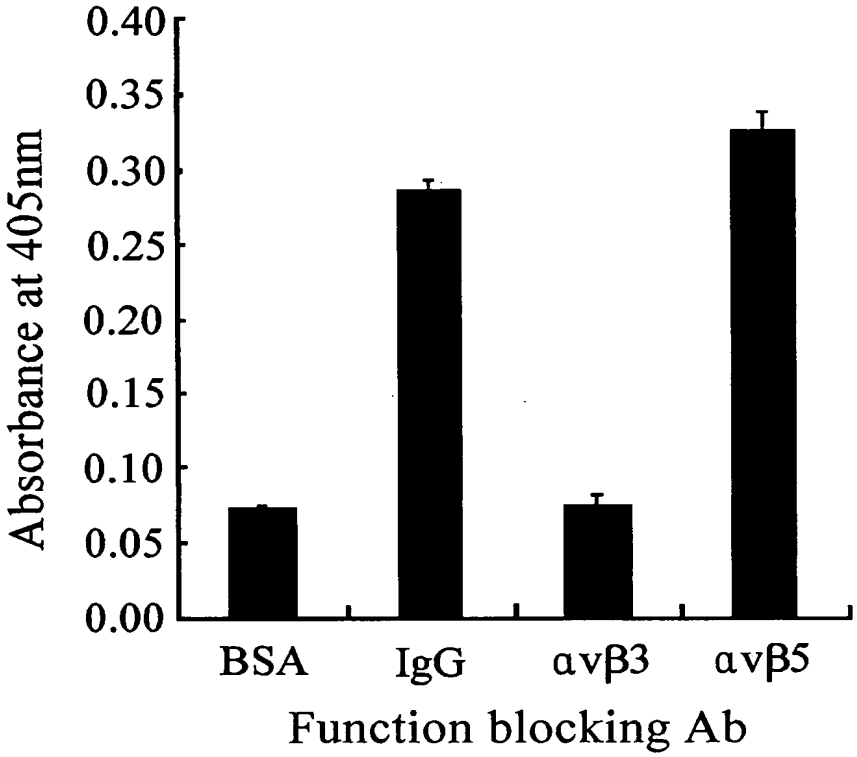

0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Absorbance at 405nm
BSA
IgG
αvβ3
αvβ5
Function blocking Ab

FIG. 6c

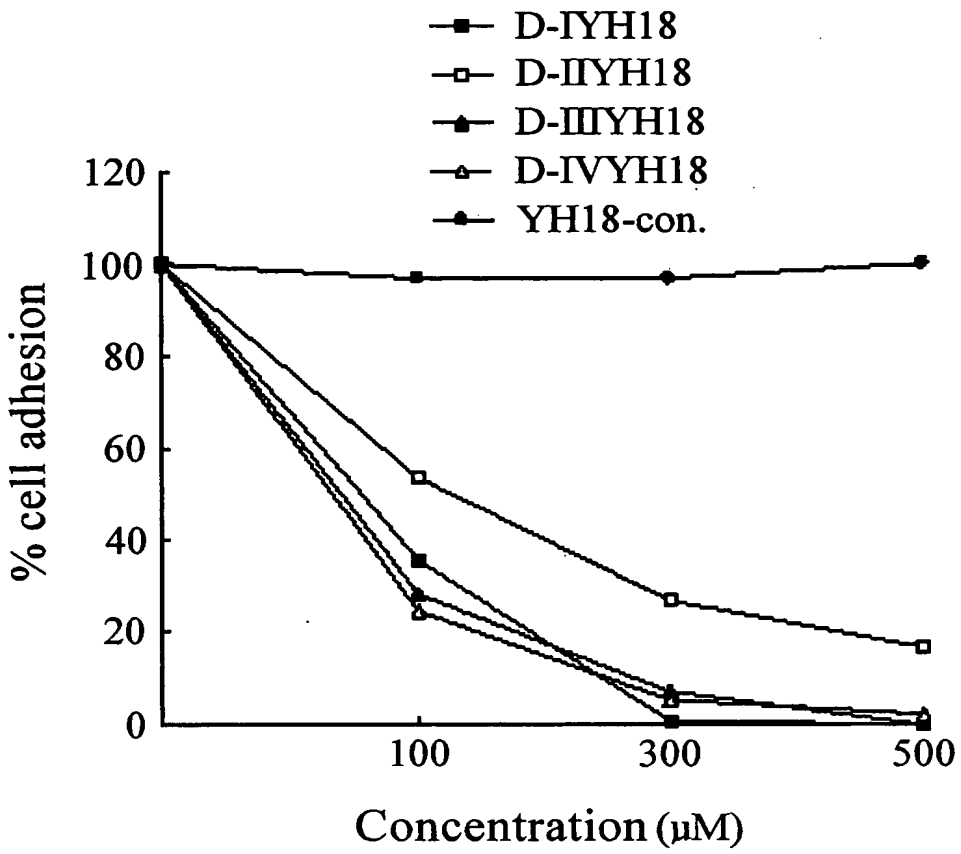

D-IYH18
D-IIYH18
D-IIIYH18
D-IVYH18
YH18-con.
120
100
80
60
40
20
0
% cell adhesion
100
300
500
Concentration (μM)

FIG. 7a

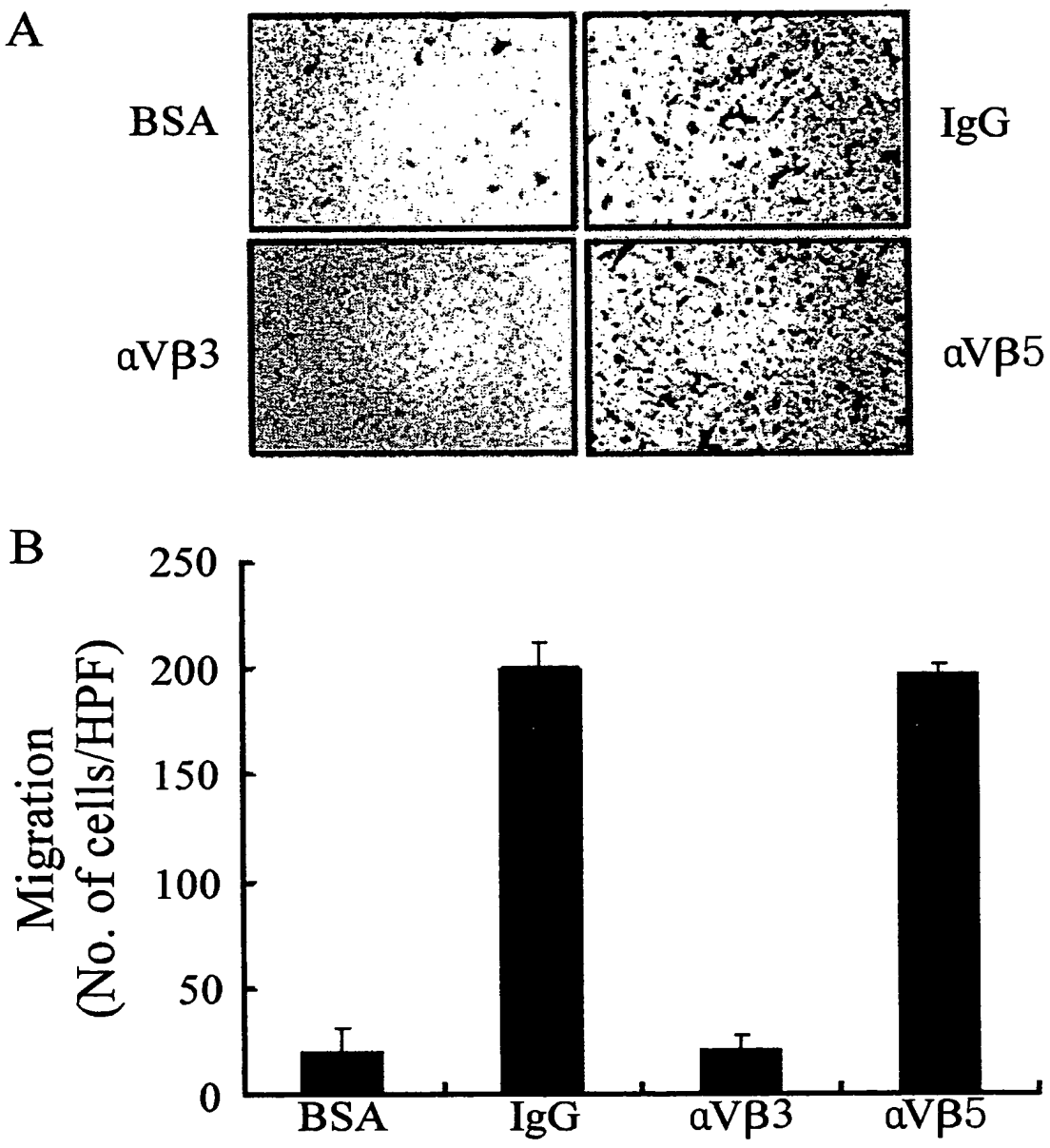

A
BSA
IgG
αVβ3
αVβ5
B
Migration
(No. of cells/HPF)
250
200
150
100
50
0
BSA
IgG
αVβ3
αVβ5

FIG. 7b

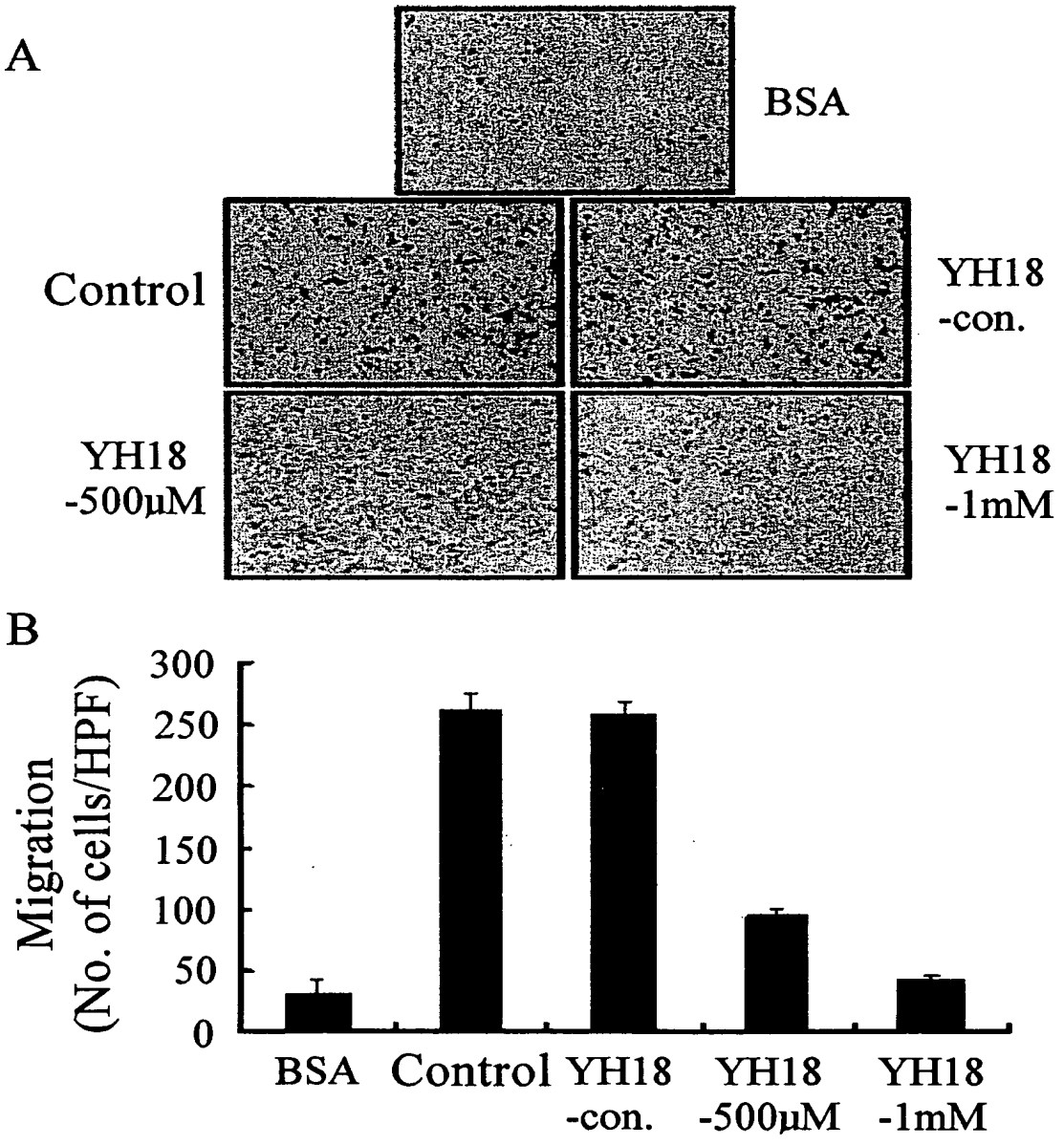
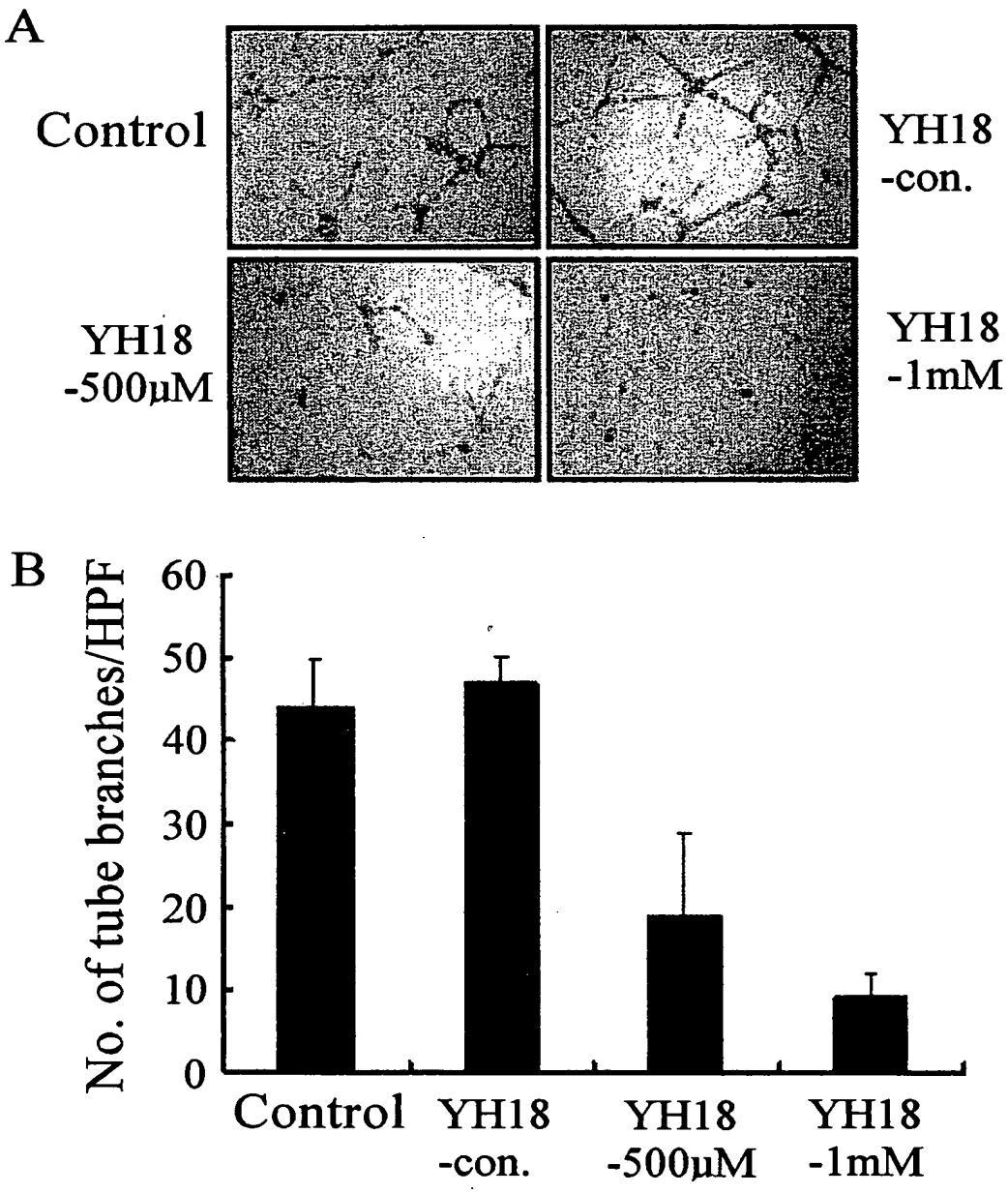
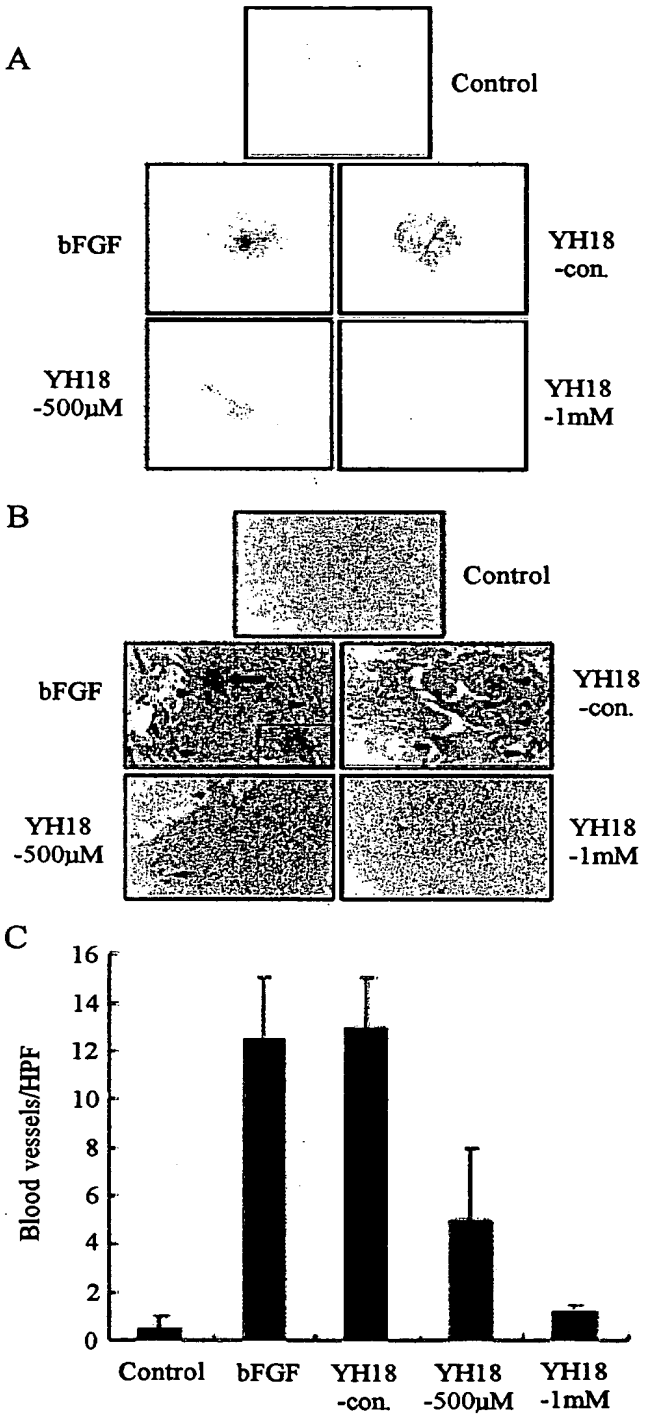

A
BSA
Control
YH18
-con.
YH18
-500μM
YH18
-1mM
B
Migration
(No. of cells/HPF)
300
250
200
150
100
50
0
BSA
Control
YH18
-con.
YH18
-500μM
YH18
-1mM

FIG. 8a


A
Control
YH18
-con.
YH18
-500μM
YH18
-1mM
B
No. of tube branches/HPF
60
50
40
30
20
10
0
Control
YH18
-con.
YH18
-500μM
YH18
-1mM

16/16

FIG. 8b


A
Control
bFGF
YH18 -con.
YH18 -500μM
YH18 -1mM
B
Control
bFGF
YH18 -con.
YH18 -500μM
YH18 -1mM
C
Blood vessels/HPF
0
2
4
6
8
10
12
14
16
Control
bFGF
YH18 -con.
YH18 -500μM
YH18 -1mM